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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,240	11/03/2000	Ki-Hyun Joo	EXIO-004-DKA	6789

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EXAMINER

SCHEIBEL, ROBERT C

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/706,240

Applicant(s)

JOO ET AL.

Examiner

Robert C. Scheibel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 22-25 is/are rejected.
- 7) ☒ Claim(s) 18-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 311. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

- reference character "340" has been used to designate both the call agent and the PSTN gateway;
- reference character "320" has been used to designate both the call agent and the MG.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because:

- In figure 3, the items numbered 301-303 appear to be logical links and not mobile units (as they are described in line 13 of page 12); when correcting this error, note that these elements are described correctly in other parts of the document.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

- There are a number of grammatical and spelling errors in the document.

Please review the document and correct these errors. For example:

- “call” is misspelled in lines 9 and 10 of page 5;
- “logicall implemenation” on line 4 of page 8 should be “logical implementations”.

Appropriate correction is required.

Claim Objections

6. Claims **2, 7 and 12** are objected to because of the following informalities:

- In line 2 of claim 2, the phrase “for processing wireless signal” is grammatically incorrect; “signal” should be changed to “signals” or “signaling”.
- In line 1 of claim 7, the phrase “said base stations communicates” is grammatically incorrect; since only one base station was previously

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mentioned, the phrase should be changed to "said base station communicates".

- In lines 2-3 of claim 12, the phrase "to communicating mobile units in the CDMA system" is unnecessary and should be removed. The claim is clearer without this phrase.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 4 and 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the media gateway logic" in line 3. There is insufficient antecedent basis for this limitation in the claim. This rejection can be overcome by changing this phrase to "media control signal processing logic".

Regarding claims 22-25, the term "substantially" in line 13 of claim 22 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

This rejection could be overcome by specifying that the first protocol is a wireless protocol and the second is a media gateway protocol.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claims **1-3 and 7-10** are rejected under 35 U.S.C. 102(a) as being anticipated by the applicant's admitted prior art.

Regarding claim 1, figure 2 discloses a prior art enterprise CDMA system (as described in lines 9-10 of page 10). As seen in figure 2, this system comprises a base station (210), a call agent (220), a public telephone network system (PSTN connected to the gateway 230), and a plurality of mobile communication units coupled to the base station (unnumbered units on left of figure.)

Regarding claims **2 and 3**, the limitation that the base station includes a wireless signaling gateway logic and a media control signal processing logic is disclosed in lines

11-13 of page 4. The protocol units for handling wireless signaling and multi-media transactions clearly disclose the signaling and media control logic of these claims.

Regarding claim 7, the limitation that the base station communicates to the call agent using a wireless signaling protocol is disclosed in lines 13-16 of page 4. This passage indicates that in a typical wireless network, the base stations and MSC communicate using signaling based on an open interface standard and that the call agent is analogous to the MSC.

Regarding claim 8, the limitation that the wireless signaling protocol comprises an EIA/TIA-634 specification is disclosed in lines 16-17 of page 4.

Regarding claim 9, the limitation that the base station communicates to the call agent using a media gateway control protocol is anticipated by figure 2. The base station is acting as a media gateway between the CDMA wireless protocol and the IP LAN. It is well known in the art that a call agent communicates with a media gateway such as the base station using a media gateway control protocol such as MGCP.

Regarding claim 10, the limitation that the base station is packet based is disclosed in figure 2 by the fact that it is connected to the call agent and the gateway on an IP LAN; to communicate over this packet based LAN, the base station must be packet based.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims **4-6, 11-17, 22, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of U.S. Patent Application Publication 2002/0089998 to Le.

Regarding claims **4-6 and 11-12**, Applicant's admitted prior art discloses all the limitations of the parent claims 1 and 3 as described in the rejection under 35 U.S.C. 102(a) above. Applicant's admitted prior art does not expressly disclose the limitations of the service negotiation logic, conversion logic, or linking logic of claims 4-6 and 11-12.

Regarding claim 4, Le discloses the limitation of the service negotiation logic in the real-time manager 84 of figure 3 and the passage from lines 7-17 of paragraph 44 on page 4. The negotiation is the exchange of messages between the requestor and the real-time manager.

Regarding claim 5, Le discloses the conversion logic in the converter 116 of figure 3. The converter converts between the air interface and the RTP stream using information from the setup of the special (constant bit rate) channel (as described in paragraph 51 of page 5). Element 34 is a base station as indicated in lines 7-9 of paragraph 34 on page 3. Further, lines 5-7 of paragraph 29 on page 3 indicate that the system is a CDMA system in one embodiment. As is also shown throughout the document, the converter converts the real-time media transmitted over the wireless interface to RTP packets (see paragraph 51 on page 5 for example).

Regarding claims 6 and 11, the linking logic is suggested in the real-time manager 84 of figure 3. The linking is suggested by lines 11-14 of paragraph 51 on page 5; the UDP and IP fields identify the media stream and they are certainly correlated to an identifier of the special radio channel for the converter to work as described.

Regarding claim 12, this linking logic dedicates a radio channel to connect the mobile unit to an RTP stream when the special radio channel is set up (see lines 7-17 of paragraph 44 on page 4).

Applicant's admitted prior art and Le are analogous art because they are from the same field of endeavor of CDMA systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Applicant's admitted prior art such that the base station converted between the CDMA packets and the RTP packets as indicated in Le. The motivation for doing so would have been to transmit the data over the wireless link in a spectrally efficient manner as suggested by Le in paragraph

11 of page 2. Therefore, it would have been obvious to combine Le with Applicant's admitted prior art for the benefit of transmitting the data in a spectrally efficient manner to obtain the invention as specified in claims 4-6 and 11-12.

Regarding claims **13 and 14**, Applicant's admitted prior art discloses a CDMA base station in element 210 of figure 2. Applicant's admitted prior art discloses the limitation of the wireless signaling logic and the media gateway control protocol logic in lines 11-13 of page 4. The protocol units for handling wireless signaling and multi-media transactions clearly disclose the signaling and media control logic.

Applicant's admitted prior art does not expressly disclose linking logic for mapping wireless mobile call identifiers to corresponding media stream identifiers.

Le suggests the limitation of claim 13 of linking logic for mapping wireless mobile call identifiers to corresponding media stream identifiers in the real-time manager 84 of figure 3. The linking is suggested by lines 11-14 of paragraph 51 on page 5; the UDP and IP fields identify the media stream and they are certainly correlated to an identifier of the special radio channel for the converter to work as described.

Regarding claim 14, the limitation of claim 14 of conversion logic converting CDMA packets to RTP packets is disclosed in the converter 116 of figure 3. The converter converts between the air interface and the RTP stream using information from the setup of the special (constant bit rate) channel (as described in paragraph 51 of page 5). Element 34 is a base station as indicated in lines 7-9 of paragraph 34 on page 3. Further, lines 5-7 of paragraph 29 on page 3 indicate that the system is a CDMA system in one embodiment. As is also shown throughout the document, the converter

converts the real-time media transmitted over the wireless interface to RTP packets (see paragraph 51 on page 5 for example).

Applicant's admitted prior art and Le are analogous art because they are from the same field of endeavor of CDMA systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Applicant's admitted prior art such that the base station converted between the CDMA packets and the RTP packets as indicated in Le. The motivation for doing so would have been to transmit the data over the wireless link in a spectrally efficient manner as suggested by Le in paragraph 11 of page 2. Therefore, it would have been obvious to combine Le with Applicant's admitted prior art for the benefit of transmitting the data in a spectrally efficient manner to obtain the invention as specified in claims 13 and 14.

Regarding claim **15**, Applicant's admitted prior art discloses the multi-protocol packet based base station in the base station 210 of figure 2. Applicant's admitted prior art also discloses the limitation of the call agent in the call agent 220 of figure 2. Applicant's admitted prior art discloses mobile terminals in figure 2.

However, Applicant's admitted prior art does not expressly disclose the limitation of the mobile terminals being adapted to communicate via multiple protocols.

Le discloses a mobile station 12 (in figure 3) which supports multiple protocols (RTP, UDP, IP, and the CDMA protocol(s) implemented in the lower layers 66).

Applicant's admitted prior art and Le are analogous art because they are from the same field of endeavor of CDMA systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Applicant's admitted prior art

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such that the mobile station supported RTP as indicated in Le. The motivation for doing so would have been to support standardized protocols for communicating multimedia via the Internet as suggested by Le in paragraph 5 on page 1. Therefore, it would have been obvious to combine Le with Applicant's admitted prior art for the benefit of supporting standardized multimedia protocols to obtain the invention as specified in claim 15.

Regarding claim **16**, with the limitations of the parent claim 15 addressed as above, Applicant's admitted prior art discloses the limitation of the base station including wireless signaling logic in the protocol unit for handling wireless signaling discussed in lines 11-13 of page 4.

Regarding claim **17**, with the limitations of the parent claim 16 addressed as above, Applicant's admitted prior art discloses the limitation of the base station including media gateway logic in the protocol units for handling multi-media transactions discussed in lines 11-13 of page 4.

Regarding claims **22 and 25**, Applicant's admitted prior art discloses a wireless enterprise CDMA system. Applicant's admitted prior art discloses steps (a) of receiving a call message and (b) processing the call message in the protocol unit to handle wireless signaling described on line 12 of page 4. It is inherent that the base station must receive call messages if the protocol unit is going to actually handle wireless signaling. Further, it is also inherent that the protocol unit for handling wireless signaling will process the call messages.

Applicant's admitted prior art does not disclose expressly the limitations of steps (c) and (d) of claim 22.

Le discloses step (c) of creating a virtual traffic communication path to transmit said call message within the CDMA system in the H.245 signaling to set up the RTP path to the destination described in lines 7-17 of paragraph 44 on page 4. Le discloses step (d) of transmitting the call message using a separate signal protocol in the conversion between the radio-link format and the packet-data format described in lines 6-9 of paragraph 14 of page 2. As is clear from figure 3 and the entire document, this packet-data format is RTP which is different from the first CDMA protocol.

Regarding claim 25, the second protocol is RTP as described above. RTP is well known in the art to be used in media control gateways and thus discloses the limitation that the second protocol is adapted for a media control gateway.

Applicant's admitted prior art and Le are analogous art because they are from the same field of endeavor of CDMA systems. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Applicant's admitted prior art such that the mobile station supported RTP as indicated in Le. The motivation for doing so would have been to support standardized protocols for communicating multimedia via the Internet as suggested by Le in paragraph 5 on page 1. Therefore, it would have been obvious to combine Le with Applicant's admitted prior art for the benefit of supporting standardized multimedia protocols to obtain the invention as specified in claim 15.

Allowable Subject Matter

15. Claims **18-21** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. Claims **23 and 24** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application Publication 2001/0022784 to Menon et al discloses a base station (in the embodiment where the WARP functionality is implemented in the base station) which converts wireless protocol packets to RTP packets in a manner similar to that disclosed in the present application.

U.S. Patent Application Publication 2001/0043577 to Barany et al also discloses a base station which interfaces with a media gateway for communicating via packet networks.

U.S. Patent 5,956,331 to Rautiola et al, U.S. Patent 6,542,497 to Curry et al, and U.S. Patent 6,295,457 to Narayanaswamy all disclose base stations which allow mobile units access to packet networks.

RFC 2705 "Media Gateway Control Protocol (MGCP)" discloses a well-known protocol for call agents to communicate with media gateways.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 703-305-9062. The examiner can normally be reached on 6:30-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 3-31-04
Robert C. Scheibel
Examiner
Art Unit 2666

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